

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
ALEXANDRIA DIVISION**

THE BOEING COMPANY and
AURORA FLIGHT SCIENCES CORPORATION,
A BOEING COMPANY,

Plaintiffs,

v.

VIRGIN GALACTIC, LLC,

Defendant.

Civil Action No. 24-cv-00456

**MEMORANDUM IN SUPPORT OF PLAINTIFFS'
MOTION FOR PRELIMINARY INJUNCTION**

TABLE OF CONTENTS

INTRODUCTION.....	1
BACKGROUND.....	2
A. Virgin Galactic’s Mothership	2
B. The Master Agreement and Task Orders for the Mothership Program	3
C. Boeing’s and Aurora’s Trade Secrets	6
1. The Math Model Documents	6
2. The 262 Document	9
LEGAL STANDARD	12
ARGUMENT	13
I. BOEING AND AURORA ARE LIKELY TO SUCCEED ON THE MERITS OF THEIR CLAIMS FOR MISAPPROPRIATION OF THEIR TRADE SECRETS.....	13
A. The Math Model Documents and the 262 Document Contain Trade Secrets.	13
B. Virgin Galactic Misappropriated Boeing’s and Aurora’s Trade Secrets.....	17
II. BOEING AND AURORA ARE LIKELY TO SUCCEED ON THE MERITS OF THEIR CLAIMS FOR BREACH OF CONTRACT.....	22
III. BOEING AND AURORA ARE LIKELY TO SUFFER IRREPARABLE HARM ABSENT A PRELIMINARY INJUNCTION.....	26
IV. THE EQUITIES FAVOR PROTECTING BOEING’S AND AURORA’S TRADE SECRETS.	29
V. A PRELIMINARY INJUNCTION WOULD SERVE THE PUBLIC INTEREST.....	30
CONCLUSION	30

TABLE OF AUTHORITIES

	Page
CASES	
<i>A.P. Moller-Maersk A/S v. eSCRUB Sys., Inc.</i> , 2007 WL 4562827 (E.D. Va. Dec. 21, 2007)	30
<i>AirFacts, Inc. v. de Amezaga</i> , 909 F. 3d 84 (4th Cir. 2018)	15
<i>API Tech. Servs., LLC v. Francis</i> , 2013 WL 12131381 (E.D. Va. Dec. 4, 2013)	29
<i>Apollo Enter. Imaging Corp. v. Conyers</i> , 2020 WL 1896706 (E.D. Va. Jan. 10, 2020)	20
<i>Brightview Grp., LP v. Teeters</i> , 441 F. Supp. 3d 115 (D. Md. 2020).....	28
<i>CACI, Inc. - Fed. v. U.S. Navy</i> , 674 F. Supp. 3d 257, 2023 WL 3570439 (E.D. Va. 2023)	27, 28, 29, 30
<i>Cap. One Fin. Corp. v. Sykes</i> , 2021 WL 2903241 (E.D. Va. July 9, 2021).....	22, 23, 26, 27, 29, 30
<i>Datatel, Inc. v. Rose & Tuck, LLC</i> , 2005 WL 1668020 (E.D. Va. June 17, 2005).....	27
<i>Fireworks Spectacular, Inc. v. Premier Pyrotechnics, Inc.</i> , 147 F. Supp. 2d 1057 (D. Kan. 2001).....	15, 16
<i>Gates Rubber Co. v. Bando Chem. Indus., Ltd.</i> , 9 F.3d 823 (10th Cir. 1993).....	15
<i>Hampton Roads Connector Partners v. Land to Sand Site Servs., Inc.</i> , 2023 WL 8539536 (E.D. Va. Oct. 17, 2023).....	27
<i>Hoechst Diafoil Co. v. Nan Ya Plastics Corp.</i> , 174 F.3d 411 (4th Cir. 1999)	15
<i>Home Funding Grp., LLC v. Myers</i> , 2006 WL 6847953 (E.D. Va. Dec. 14, 2006).....	27
<i>JetSmarter, Inc. v. Benson</i> , 2018 WL 2694598 (S.D. Fla. Apr. 6, 2018)	21
<i>Learning Curve Toys v. PlayWood Toys, Inc.</i> , 342 F.3d 714 (7th Cir. 2003)	14, 16
<i>MicroStrategy, Inc. v. Bus. Objects, S.A.</i> , 331 F. Supp. 2d 396 (E.D. Va. 2004).....	15

<i>Multi-Channel TV Cable Co. v. Charlottesville Qual. Cable Operating Co.</i> , 22 F.3d 546 (4th Cir. 1994)	26
<i>Myers v. Williams</i> , 819 F. Supp. 919 (D. Or. 1993)	20
<i>Oakwood Lab'ys LLC v. Thanoo</i> , 999 F.3d 892 (3d Cir. 2021).....	13
<i>OROS, Inc. v. Dajani</i> , 2019 WL 2361047 (E.D. Va. June 4, 2019)	13, 21
<i>Peraton, Inc. v. Raytheon Corp.</i> , 2017 WL 11501665 (E.D. Va. Nov. 7, 2017).....	19, 27, 28, 29
<i>Ruckelshaus v. Monsanto Co.</i> , 467 U.S. 986 (1984).	27
<i>Scotts Co. v. United Indus. Corp.</i> , 315 F.3d 264 (4th Cir. 2002).	26
<i>SDSE Networks, Inc. v. Mathur</i> , 2022 WL 18539944 (E.D. Va. Dec. 28, 2022).....	23, 27, 29, 30
<i>Space Sys./Loral, LLC v. Orbital ATK, Inc.</i> , 306 F. Supp. 3d 845 (E.D. Va. 2018) ...	13, 14, 19, 21
<i>Sys. 4, Inc. v. Landis & Gyr, Inc.</i> , 8 F. App'x 196 (4th Cir. 2001).....	21
<i>Tao of Sys. Integration, Inc. v. Analytical Servs. & Materials, Inc.</i> , 299 F. Supp. 2d 565 (E.D. Va. 2004).	17
<i>Update, Inc. v. Samilow</i> , 311 F.Supp.3d 784 (E.D. Va. 2018)	26
<i>Variable Annuity Life Ins. Co. v. Coreth</i> , 535 F. Supp. 3d 488 (E.D. Va. 2021)	<i>passim</i>
<i>WeRide Corp. v. Kun Huang</i> , 379 F. Supp. 3d 834 (N.D. Cal. 2019)	14, 16
<i>Winter v. Nat'l Res. Def. Council, Inc.</i> , 555 U.S. 7 (2008).....	12, 26, 29
STATUTES	
6 Del. C. § 2001	14, 16, 17, 18, 20
6 Del. C. § 2002	12, 26
18 U.S.C. § 1836.....	12, 26
18 U.S.C. § 1839.....	13, 14, 16, 17, 18, 20, 21, 22
OTHER AUTHORITIES	
Fed. R. Civ. P. 65.....	12

Virgin Galactic Holdings, Inc., Q3 Earnings Presentation (Nov. 8, 2023), <i>available at</i> https://tinyurl.com/VGQ32023Earnings	3, 18, 28
Virgin Galactic Holdings, Inc., Q3 Earnings Call Transcript (Nov. 8, 2023), <i>available at</i> https://tinyurl.com/VGQ3EarningsTranscript	18, 28

INTRODUCTION

Defendant Virgin Galactic LLC is violating federal and state trade secret laws by retaining, using, and threatening further use of trade secrets that belong to Plaintiff The Boeing Company and its wholly-owned subsidiary, Plaintiff Aurora Flight Sciences Corporation. As part of a contractual relationship between Virgin Galactic and Aurora, Virgin Galactic obtained two sets of documents reflecting Boeing's and Aurora's trade secrets. The first is a set of proprietary mathematical equations used to design and model aircraft that are reflected in a pair of documents (the "Math Model Documents") Aurora inadvertently disclosed through a SharePoint site. The second is a set of proprietary test data that Aurora conditionally disclosed as proprietary information without offering a license (the "262 Document"). These trade secrets are proprietary information to which Virgin Galactic holds no contractual rights, and both are subject to an agreement requiring Virgin Galactic to return or destroy proprietary information at Aurora's direction. But Virgin Galactic has refused to do so. Virgin Galactic's retention and use of these trade secrets in breach of its contractual obligations violate the Defend Trade Secrets Act (DTSA) and the Delaware Uniform Trade Secrets Act (DUTSA). And that irreparably harms Boeing and Aurora, who cannot recover the confidentiality of their secrets after use or disclosure in an industry that depends on long-term developmental investments.

Virgin Galactic engaged Aurora to help it develop a new jet carrier and launch vehicle for its space tourism business. Because the new jet carrier—which Virgin Galactic calls a Mothership—was so critical to the company's business, Virgin Galactic wanted it produced as quickly, and as inexpensively, as possible. But developmental engineering in the human space exploration business often, notoriously, takes more time and resources than expected. Knowing that, Aurora agreed to perform engineering development work on a time-and-materials basis—

meaning at an hourly rate plus the cost of any materials used—and did not promise that it could produce a new Mothership by a fixed date or on a budget certain. Aurora upheld its end of the bargain and by May 2023 had performed the preliminary work it had agreed to do. In doing so, Aurora concluded that the production of a new Mothership would take longer, and be more expensive, than Virgin Galactic had hoped—and perhaps, than its business plans could bear. That was not the answer Virgin Galactic wanted. Since that time, the parties have not undertaken any additional work on the Mothership together, and Virgin Galactic has refused to pay Aurora more than \$25 million for work Aurora has already performed.

Meanwhile, Virgin Galactic has also refused to honor its contractual obligation to destroy the two sets of trade secrets at issue. Boeing developed these trade secrets over decades of engineering, testing, building, and flying aircraft. Virgin Galactic’s ongoing, unauthorized retention and use of these trade secrets to develop a new Mothership deliberately deprives Boeing and Aurora of their exclusive property rights and imposes irreparable harm by risking exposure to other competitors, after which the information cannot retain its secret status. That is exactly the result trade secrets laws are meant to prevent. The Court should enjoin Virgin Galactic’s ongoing misappropriation of trade secrets pending resolution of Boeing’s and Aurora’s claims on the merits.

BACKGROUND

A. Virgin Galactic’s Mothership

Founded by billionaire Richard Branson in 2004, Virgin Galactic offers space tourists the chance to take suborbital flights aboard a rocket-powered space plane called Space Ship *Unity*. *Unity* launches to suborbital space at an altitude of approximately 44,000 feet from aboard a jet

carrier known as Virgin Mothership *Eve*. Virgin Galactic unveiled *Eve* in 2008; *Unity* took its first crewed flight—with Branson aboard—in July 2021, and its first commercial flight in June 2023.

Eve, however, has structural, maintenance, and reliability issues that threaten Virgin Galactic’s business model. According to Virgin Galactic’s public statements, each *Unity* flight launched from *Eve* earns between \$1.8 and \$2.4 million in revenue.¹ But in part as a result of *Eve*’s known structural issues and maintenance needs, Virgin Galactic has to date flown *Unity* and *Eve* at only a monthly cadence, limiting its profitability and long-term viability.

As a result, Virgin Galactic has been trying to develop a replacement Mothership since even before *Unity*’s first crew flight. In 2021, Virgin Galactic solicited information from potential suppliers about designing, fabricating, and testing a new fleet of Motherships. *See* Ex. 1, Declaration of Lawrence M. (“Larry”) Wirsing ¶ 5. Virgin Galactic wanted the new Mothership to remedy *Eve*’s known structural issues by reducing maintenance needs and increasing aircraft availability and performance. *See id.* ¶ 7. With those improvements to its Mothership fleet, Virgin Galactic envisioned that it could fly multiple commercial space flights per day—up to 200 flights per year. Virgin Galactic wanted the first new Mothership to be ready by early 2024 at the latest, with additional aircraft to follow. *See id.* ¶ 8.

B. The Master Agreement and Task Orders for the Mothership Program

Aurora and Virgin Galactic first discussed the Mothership program in early 2021. *Id.* ¶ 5. After an initial exchange of information, they entered into an Engineering Services Agreement in early 2022. *Id.* ¶¶ 9, 12. In July 2022, they entered a new “Master Agreement” to govern their efforts to develop a new Mothership. *Id.* ¶ 15 & Ex. A, Master Agreement. The Master Agreement

¹ Virgin Galactic Holdings, Inc. Q3 2023 Earnings Presentation (Nov. 8, 2023) at 8, available at <https://tinyurl.com/VGQ32023Earnings>.

provides overarching terms that govern the relationship and provide that the parties will proceed in a gated process, doing work set forth in individually negotiated Task Orders. *Id.* ¶¶ 15–16. Each Task Order includes a Statement of Work that specifies what deliverables Aurora will provide to Virgin Galactic and when it will provide them. *Id.* ¶ 16. The terms of the Master Agreement govern each Task Order, including with respect to the handling of proprietary information and other intellectual property the parties would exchange or develop in connection with the Mothership program. *Id.* ¶ 15 & Ex. A, Master Agreement § 8 (Proprietary Information); § 7 (Intellectual Property Rights, discussed *infra* Part II). Under those terms, a party in receipt of Proprietary Information must “promptly return, or otherwise destroy, Proprietary Information as the Disclosing Party may direct.” *Id.* Ex. A, Master Agreement § 8.F. And “[w]ithout obtaining the owning party’s written consent, the other party shall make no further use, either directly or indirectly for any third parties, of any data or any information derived from any Proprietary Information.” *Id.* § 8.H. The Master Agreement also entitles Virgin Galactic to certain specified intellectual property—Foreground Intellectual Property first developed for Virgin Galactic and Background Intellectual Property Aurora identifies and licenses. *Id.* § 7. But the trade secrets at issue here are neither of those things. *See infra* Part II.

Aurora performed work on two Task Orders under the Master Agreement between July 2022 and May 2023. *Id.* ¶¶ 15, 18. Task Order 1 was executed the same day as the Master Agreement. *Id.* Its Statement of Work covered completion of a Concept Design Review, an Integrated Baseline Review, a Tooling Procurement Readiness Review, and a Preliminary Design Review. *Id.* ¶ 19. In addition to those design reviews, the Statement of Work for Task Order 1 required Aurora to provide weekly status reports, monthly program management reviews and integrated program management reports, and quarterly program reviews. *Id.* Ex. B, Task Order 1

at 23. Aurora performed its obligations under Task Order 1. *Id.* ¶ 20. For example, it performed a Concept Design Review, an Integrated Baseline Review, and a Preliminary Design Review. And it provided status reports and updates as required.

The parties had hoped that Task Order 2 would encompass design work culminating in a Critical Design Review and completion of the new Mothership's design. *Id.* ¶ 21 & Ex. A, Master Agreement, at Ex. B at 44. But following the completion of Task Order 1, Aurora and Virgin Galactic agreed that there was additional work that needed to be done to finalize the preliminary design. *Id.* ¶ 21. As a result, Virgin Galactic and Aurora mutually agreed to execute Task Order 2.1, a precursor to an anticipated Task Order 2 that never materialized. *Id.* ¶¶ 21, 25. Aurora performed its obligations under Task Order 2.1, including conducting a second Integrated Baseline Review and addressing specific action items put in place after the Preliminary Design Review. *Id.* ¶¶ 21–23.

At the end of the second Integrated Baseline Review, Aurora informed Virgin Galactic that it would cost more and take longer to design and build the aircraft than Virgin Galactic had hoped. *Id.* ¶ 24. Two factors drove that conclusion. First, Virgin Galactic's expectations for the design of the new Mothership had expanded considerably and varied. *Id.* Second, counter to assumptions the parties made and incorporated into the Master Agreement, Virgin Galactic possessed little engineering documentation for the design of *Eve*, meaning that Aurora had to do more reverse engineering than expected to advance the design of *Eve*'s replacement. *Id.* In light of those changed circumstances, Aurora estimated that a new Mothership could not be completed before 2027 and would cost nearly twice as much as Virgin Galactic had hoped. *Id.*

Virgin Galactic did not like that answer. As a result, Aurora and Virgin Galactic did not execute any further Task Orders following the completion of Task Order 2.1. And Virgin Galactic

stopped paying Aurora’s bills related to the two Task Orders that had been completed. *Id.* ¶¶ 25–28. Both Task Orders, however, required Virgin Galactic to pay Aurora on a time-and-materials basis, meaning that Aurora billed Virgin Galactic at a specified rate on an ongoing basis. *Id.* ¶¶ 19, 22. Virgin Galactic has refused to pay Aurora approximately \$26 million for work it performed under Task Orders 1 and 2.1. *Id.* ¶¶ 26–28. In fact, Virgin Galactic has paid Aurora nothing for its work under Task Order 2.1.

C. Boeing’s and Aurora’s Trade Secrets

This motion concerns two sets of documents Virgin Galactic obtained in the course of Aurora’s work on the Mothership that contain Boeing’s and Aurora’s trade secrets: the Math Model Documents and the 262 Document.

1. The Math Model Documents

In May 2023, Virgin Galactic asked Aurora whether it had pre-existing intellectual property that Aurora might be able to leverage to help Virgin Galactic more efficiently model the way the aircraft would operate in flight and ultimately to create a flight simulator. *Id.* ¶ 30. The Task Orders did not call for Aurora to produce a new flight model or flight simulator; the conversation concerned hypothetical work under a potential future Task Order. *Id.* As part of that conversation, Aurora asked whether Virgin Galactic would be willing to accept a “black box” model, meaning a model and simulation file that Virgin Galactic would be able to use but that would not disclose any underlying equations. *Id.*

To inform its internal discussions about the possibility of sharing a “black box” model with Virgin Galactic in the future, Aurora prepared two documents—“Math Model Plan Rev A.pptx” and “Math Model Plan Rev A1.pptx” (together, the “Math Model Documents”)—that included

Boeing proprietary modeling equations (more formally, formulations, parameters, and variables).² *Id.* ¶ 31. Over many years, Boeing has developed unique and proprietary versions of these equations that allow it to design the parts of aircraft with precision and accuracy. *See* Ex. 5, Declaration of Robert D. Gregg, III ¶ 5–6. These equations tell engineers what factors are most relevant to an aircraft’s aerodynamic properties and allow engineers to advance an aircraft development program more efficiently. *See id.* ¶¶ 4–9. In particular, Boeing has identified unique formulations, parameters, and variables that tell engineers that certain factors are particularly relevant to aircraft stability and operability. *See id.* The equations also capture variables that affect the aircraft’s aerodynamics. *Id.* ¶¶ 7.

These proprietary equations enable Boeing and Aurora to model and simulate the performance of aircraft parts in controlling the aircraft’s pitch, roll, and yaw in flight—and so the performance of the aircraft itself in flight—with precision and accuracy. Gregg Decl. ¶¶ 4–9. Using these equations, Boeing and Aurora engineers can model and simulate with greater accuracy than other engineers how an aircraft’s structure affects its aerodynamic properties—including with respect to vital factors like the aircraft’s angle of attack. Ex. 4, Declaration of Jia Luo at ¶¶ 6–8; Gregg Decl. ¶¶ 7, 14. This allows engineers to see at an early stage of development if a projected aircraft model will perform safely and meet desired requirements, enabling early course correction and generating confidence as design moves to more advanced stages of development. Gregg Decl. ¶ 9. For example, if the model indicates a plane as designed might require too much pilot force to control it under certain conditions, that could indicate—at an earlier stage of development than without such precise simulation—that a design change is required.

² Paragraph 3 of the Declaration of Robert D. Gregg, III, *see* Ex. 5, and paragraph 31 of the Declaration of Larry Wirsing, *see* Ex. 1, refer to the document with the file name “Math Model Plan Rev A1.pptx” as “Math Model PlanA1.pptx.”

The equations in the Math Model Documents reflect Boeing's investment of substantial financial and other resources. Luo Decl. ¶ 6; Gregg Decl. ¶¶ 10–11. Boeing developed and refined these proprietary equations over the course of decades of commercial aircraft development. *Id.* Because the equations reflect unique proprietary information Boeing has developed over time, they provide a significant competitive advantage in the development of commercial and other aircraft. Gregg Decl. ¶ 14. Boeing holds these equations closely, limits access to them, and labels them as proprietary. Luo Decl. ¶¶ 9–11; Gregg Decl. ¶¶ 15–18. Any release of the equations is subject to an official process for the “Release of Boeing Proprietary Information” involving multiple layers of review across the Company. *Id.* Consistent with that process, Boeing has only rarely licensed flight modeling equations for use by the leading flight simulator manufacturer, and even then it has imposed strict confidentiality terms. Gregg Decl. ¶¶ 20–22.

At the end of Task Order 2.1, Aurora provided Virgin Galactic with Program Deliverables under Task Order 2.1 and supporting materials through a SharePoint site. Wirsing Decl. ¶ 34. Aurora inadvertently included the Math Model Documents in those SharePoint materials. *Id.* The Math Model Documents were not Program Deliverables under any Task Order or necessary to exploit Virgin Galactic's rights in any such Deliverables, and Aurora never intended to provide these documents to Virgin Galactic. *Id.* ¶¶ 32–33, 35 & Ex. F. On June 16, 2023, after Aurora realized its mistake, Aurora requested that Virgin Galactic destroy the Math Models on the basis that they had been erroneously transmitted and included proprietary information. *Id.* ¶ 34–35 & Ex. F.

To date, Virgin Galactic has refused to destroy the Math Model Documents. *Id.* ¶ 36. Worse, Virgin Galactic maintains that it is entitled to use the Math Model Documents in further development efforts, including with a new partner. *Id.*

2. The 262 Document

During its work on the Mothership Program, Aurora recommended that Virgin Galactic build the new Mothership using a particular commercially available carbon composite material called “IM7/8552.” *Id.* ¶ 37. In connection with that recommendation, Aurora granted Virgin Galactic a limited license under the Master Agreement for two documents reflecting Boeing’s and Aurora’s intellectual property relating to the IM7/8552 composite. *Id.* ¶ 37–39. First, Aurora licensed for use in the Mothership Program a document detailing “Sizing Allowables” that Boeing had developed decades earlier. *See id.* ¶ 38. “Sizing Allowables,” often known as “material allowables, refer in this context to the composite’s properties—for example, its maximum strain level, strength, or modulus (resistance to deformity)—under a range of conditions. *See id.*; Ex. 2, Declaration of Adam Sawicki ¶ 7. Knowledge of these properties allows engineers to design aircraft parts efficiently and with the appropriate margins for safety, operability, maintainability, and to enable appropriate repairs. *Id.* ¶ 8. *Second*, Aurora licensed to Virgin Galactic a document reflecting a “Process Specification” for the use of IM7/8552. *See* Wirsing Decl. ¶ 39. This document details how Virgin Galactic should handle the composite to ensure that it performs as described in the Sizing Allowables. *See* Sawicki Decl. ¶¶ 9–10. For example, the Process Specification explains how to stack, bond, and cure the combinations of fiber and adhesives of the composite, at certain temperatures and in certain environments, for certain time periods, and with certain tools. *See id.*

Importantly, the Sizing Allowables and Process Specification documents do not disclose *how* Boeing and Aurora know the asserted Sizing Allowables properties or handling specifications for IM7/8552, nor do they show the test data and statistical analysis Boeing used to derive those properties. *Id.* ¶ 11. In order to build the Mothership, Virgin Galactic needs to know what material

to use, how that material performs, and how it should be handled. *Id.* ¶ 17. But Virgin Galactic does not need to know how Boeing and Aurora know IM7/8552 will perform in particular ways or see the data supporting that knowledge. *Id.* ¶¶ 17–18.

Virgin Galactic nevertheless expressed interest in learning what data Aurora had to support the Sizing Allowables and Process Specification documents. Wirsing Decl. ¶ 40. These data were not Program Deliverables under any Task Order or necessary to exploit Virgin Galactic’s rights in any such Deliverables. *See id.* ¶¶ 40, 45. After Aurora and Boeing conducted Boeing’s internal review process for disclosing proprietary information outside the Company, Aurora provided Virgin Galactic with a document titled AR21-262-Rev- (the “262 Document”), which included Boeing’s and Aurora’s proprietary test data for IM7/8552. *Id.* ¶ 42. The 262 Document bears a legend: “BOEING PROPRIETARY / AURORA PROPRIETARY.” *Id.* ¶ 43 & Ex. H. In its transmittal email, Aurora expressly stated that the 262 Document contained Boeing Proprietary Information and was being disclosed under the terms of the Master Agreement governing proprietary information. *Id.* ¶ 43. Aurora also made clear that it was not offering Virgin Galactic a license to the test data at that time. *Id.* ¶ 44 & Ex. G. Virgin Galactic did not raise any objections to the terms on which Aurora provided the 262 Document. *Id.* ¶ 44.

Boeing developed the test data reflected in the 262 Document—evidence of the capabilities and characteristics of IM7/8552—through significant investment and effort. In particular, Boeing and its contractual partners conducted thousands of tests on the material under varying conditions in connection with an unrelated defense development program decades ago. *See Sawicki Decl.* ¶¶ 20–22. Boeing also conducted statistical analyses on those test results. *Id.* ¶ 21. The result is a large compilation of data showing how IM7/8552, when processed a certain way, performs under a variety of conditions across thousands of tests. *Id.* ¶ 22. These data are not generally known in

the industry, and Boeing and Aurora would not know them if Boeing and its contractual partners had not performed this extensive and expensive testing. *Id.*

These data are highly valuable to an aircraft development program—over and above the Sizing Allowables and Process Specifications derived from the data—because they are much more detailed and granular. *See id.* ¶¶ 14–16. For example, the test data reveal not just the average performance of the composite, but also the range of individual test results that yielded that average, plus standard deviations and other relevant statistics. *Id.* ¶ 14. As engineers model, simulate, and conduct tests during aircraft development, results that are inconsistent with the large pool of test data Boeing has amassed would raise a valuable red flag indicating a potential error in how the material was processed, designed, or manufactured. *Id.* ¶¶ 15, 18. Learning of such an error earlier in the process, rather than later, could save a developer time and money—or more important, help avoid manufacturing variances and in-service maintenance actions or repairs once the aircraft has been produced. *Id.* ¶ 15. Moreover, the test data provide engineers more insight into which factors—like temperature, force, and other parameters—are relevant to the material’s performance. *Id.* ¶ 16. With the benefit of the test data, developmental engineers can better understand which factors may change the material’s performance and the scale at which those changes occur. *Id.* ¶¶ 14, 16. Thus, even though the 262 Document is not necessary for Virgin Galactic to exploit the plans Aurora developed for it, the data it contains make the process of developing an aircraft out of IM7/8552 less expensive and more efficient. *Id.* ¶¶ 17–18.

Boeing holds the material qualification and allowables test data reflected in the 262 Document closely because they reflect the investment of substantial financial and other resources in its aerospace business and provide Boeing a significant competitive advantage. *See Ex. 3, Declaration of Sue Paish* ¶¶ 4–7, 9. As a result, Boeing limits access to those data and consistently

labels them as proprietary, just as it did here. *Id.* ¶¶ 4, 6. Boeing has only rarely licensed material qualification and allowables test data for use outside the Company, and even then it has done so only to noncompetitors and subject to strict confidentiality terms. *Id.* ¶¶ 12–15. Any release of the test data is subject to an official process—the “Release of Boeing Proprietary Information” process—involving multiple layers of review by stakeholders across the Company. *Id.* ¶¶ 10–11.

At the conclusion of Task Order 2.1, Aurora and Virgin Galactic had not reached an agreement about a license for the 262 Document. Wirsing Decl. ¶ 46. Accordingly, on May 19, 2023, after the parties’ work together had ended, Aurora requested that Virgin Galactic destroy the 262 Document in accordance with the Proprietary Information provision of the Master Agreement. *Id.* ¶ 47 & Ex. I. Virgin Galactic has refused to do so. *Id.* ¶¶ 48–49. Worse, Virgin Galactic maintains that it is entitled to use the 262 Document’s information in further development efforts, including with a new partner. *Id.*

LEGAL STANDARD

The Defend Trade Secrets Act (DTSA) and the Delaware Uniform Trade Secrets Act (DUTSA) both expressly authorize injunctive relief “to prevent any actual or threatened misappropriation” of trade secrets. 18 U.S.C. § 1836(b)(3)(A); *see also* 6 Del. C. § 2002(a). To obtain a preliminary injunction, a plaintiff must show that (1) it is likely to succeed on the merits of its claims; (2) it will likely suffer irreparable harm without preliminary relief; (3) the balance of the equities favors relief; and (4) the injunction serves the public interest. *Winter v. Nat’l Res. Def. Council, Inc.*, 555 U.S. 7, 20 (2008); *see* Fed. R. Civ. P. 65.

ARGUMENT

I. BOEING AND AURORA ARE LIKELY TO SUCCEED ON THE MERITS OF THEIR CLAIMS FOR MISAPPROPRIATION OF THEIR TRADE SECRETS.

Boeing and Aurora are likely to succeed on the merits of their misappropriation claims against Virgin Galactic. To prove misappropriation of trade secrets under the DTSA, Boeing and Aurora must show that they own trade secrets; that the trade secrets are used or intended for use in interstate or foreign commerce; and that Virgin Galactic misappropriated the trade secrets. *See Space Sys./Loral, LLC v. Orbital ATK, Inc.*, 306 F. Supp. 3d 845, 853 (E.D. Va. 2018). The standard under the DUTSA is substantively identical, minus the interstate commerce requirement. *See, e.g., Oakwood Lab 'ys LLC v. Thanoo*, 999 F.3d 892, 909–10 (3d Cir. 2021) (explaining that the DTSA and the Uniform Trade Secrets Act include “substantively identical definitions of ‘misappropriation’”); *OROS, Inc. v. Dajani*, 2019 WL 2361047, at *2 (E.D. Va. June 4, 2019). The interstate commerce element is indisputably present here because Boeing and Aurora use these secrets in their national and international business designing and marketing aircraft. *See* Paish Decl. ¶ 9; Luo Decl. ¶ 11; Gregg Decl. ¶ 13. And Boeing and Aurora are likely to succeed in establishing the other two elements—the existence of a trade secret and misappropriation—with respect to both the equations in the Math Model Documents and the test data in the 262 Document.

A. The Math Model Documents and the 262 Document Contain Trade Secrets.

To be a trade secret, the information at issue must (1) be protectable under the statutes; (2) derive economic value by virtue of not being generally known or readily ascertainable; and (3) be kept secret by “reasonable measures.” 18 U.S.C. § 1839(3); *see Variable Annuity Life Ins. Co. v. Coreth*, 535 F. Supp. 3d 488, 515 (E.D. Va. 2021). The equations in the Math Model Documents and the test data in the 262 Document meet all three criteria.

Math Model Documents. Boeing and Aurora are likely to succeed in showing that the proprietary equations reflected in the Math Model Documents qualify as trade secrets. *First*, they are plainly protectable information under the DTSA, which covers “all forms and types of . . . scientific, technical, . . . or engineering information, including . . . formulas” and “methods.” 18 U.S.C. § 1839(3) (emphases added); *accord* 6 Del. C. § 2001(4) (covering “information, including a formula”); *Space Sys./Loral*, 306 F. Supp. 3d at 853 (documents “relat[ing] to . . . technological development for robotic satellite assembly, system engineering, and research and development” qualify as trade secrets). *Second*, these equations derive economic value from not being generally known or readily ascertainable. *See Variable Annuity Life Ins. Co.*, 535 F. Supp. 3d at 513–14 (finding this element satisfied where information is valuable to a “competitor armed with” it). The economic value of these equations is evidenced by the time and money Boeing has invested in developing and refining them. *E.g.*, *Learning Curve Toys v. PlayWood Toys, Inc.*, 342 F.3d 714, 728 (7th Cir. 2003) (“A significant expenditure of time and/or money in the production of information may provide evidence of value, which is relevant to” whether the information derives “economic value . . . from not being generally known.”); *WeRide Corp. v. Kun Huang*, 379 F. Supp. 3d 834, 847 (N.D. Cal. 2019) (finding that a trade secret “has value” based on “investment and development” in “confidential and proprietary” source code). Through those investments, the equations allow Boeing and Aurora to model aircraft stability and control extremely accurately. *See* Gregg Decl. ¶ 8. That accuracy provides substantial economic value and gives Boeing a competitive edge over other aerospace companies, which lack equations of similar quality. *See* 18 U.S.C. § 1839(3)(B); Gregg Decl. ¶¶ 8, 13–14; Luo Decl. ¶ 11; *supra* Background Part C.1.

Third, Boeing and Aurora take “reasonable measures to keep [the equations] secret.” 18 U.S.C. § 1839(3)(A); *accord* 6 Del. C. § 2001(4)(b). Boeing marks the equations as proprietary,

stores them on secure servers and systems, and limits access to avoid unauthorized disclosure. *See* Gregg Decl. ¶¶ 15–17, 20. The equations are not disclosed outside Boeing except through a formal process involving multiple layers of approval from stakeholders across different sectors of the business. *See id.* ¶ 18–20. On the rare occasion that third parties have been permitted to access the equations, that access has been subject to licensing terms that strictly maintain the equations’ confidentiality. *See id.* ¶¶ 20–22. Those extensive efforts to protect the equations are more than reasonable. *AirFacts, Inc. v. de Amezaga*, 909 F. 3d 84, 97 (4th Cir. 2018) (confidentiality policy and restricted access to electronic documents were reasonable efforts to maintain secrecy); *Variable Annuity Life Ins. Co.*, 535 F. Supp. 3d at 514 (finding reasonable efforts to protect a trade secret existed based on “layers of user IDs and passwords,” restricting access “to a need-to-know basis,” and the use of confidentiality agreements); *MicroStrategy, Inc. v. Bus. Objects, S.A.*, 331 F. Supp. 2d 396, 416 (E.D. Va. 2004) (“[O]nly reasonable efforts must be taken to maintain secrecy,” and “[r]estricting access to information, implementing confidentiality agreements, and providing physical barriers to access are all reasonable efforts.”).

In light of these protective measures, the fact that the Math Model Documents were inadvertently disclosed through a SharePoint site does not alter their status as trade secrets. *See Hoechst Diafoil Co. v. Nan Ya Plastics Corp.*, 174 F.3d 411, 419 (4th Cir. 1999) (plaintiff was “not legally precluded from succeeding on the merits of its misappropriation claim solely because” of inadvertent disclosure that did not render trade secrets “generally known”); *Gates Rubber Co. v. Bando Chem. Indus., Ltd.*, 9 F.3d 823, 849 (10th Cir. 1993); *Fireworks Spectacular, Inc. v. Premier Pyrotechnics, Inc.*, 147 F. Supp. 2d 1057, 1066 (D. Kan. 2001). That is because Boeing and Aurora have, at all times, “evidenced a continuing intent to maintain the secrecy” of the Math Model Documents. *Gates Rubber Co.*, 9 F.3d at 849. The Math Model documents were “disclosed

as the result of a good-faith mistake” as part of a large data transfer at the conclusion of Task Order 2.1. *Fireworks Spectacular*, 147 F. Supp. 2d at 1066; *see* Wirsing Decl. ¶ 34. “Upon learning of that mistake, [Aurora] took immediate action to maintain the secrecy” of the Math Model Documents by demanding their destruction, consistent with the terms of the Master Agreement. *Fireworks Spectacular*, 147 F. Supp. 2d at 1066; *see* Wirsing Decl. ¶ 35 & Ex. F. The Math Model Documents have not lost their trade secret status in light of those events.

262 Document. Boeing and Aurora are also likely to succeed in showing that the material qualification data reflected in the 262 Document are trade secrets. *First*, they are plainly protectable “scientific, technical, . . . or engineering information.” 18 U.S.C. § 1839(3); *accord* 6 Del. C. § 2001(4). *Second*, they derive economic value from not being known or readily ascertainable. *See Variable Annuity Life Ins. Co.*, 535 F. Supp. 3d at 513–14. Their economic value is evidenced by the time and money Boeing has invested in developing and refining them. *E.g.*, *Learning Curve Toys*, 342 F.3d at 728; *WeRide Corp.*, 379 F.Supp.3d at 847. Boeing originally developed the material qualification data decades ago for a defense program unrelated to Virgin Galactic, investing substantial time and money in conducting the thousands of tests reflected in the data. *See* Sawicki Decl. ¶¶ 20–21. These data are valuable because, for example, they can alert engineers to an error in how they have designed or processed the composite earlier in the development process than would be likely without access to the data. *Id.* ¶ 15; *supra* Background Part C.2.

Third, Boeing and Aurora take “reasonable measures to keep [the data] secret.” 18 U.S.C. § 1839(3)(A); *accord* 6 Del. C. § 2001(4)(b). As with the equations, Boeing marks the data as proprietary, stores them on secure servers and systems, and limits distribution and access to prevent unauthorized disclosure. *See* Paish Decl. ¶¶ 4–6, 8. Boeing and Aurora do not grant access

to the test data outside of Boeing without conducting a formal process involving multiple layers of approval from stakeholders across different sectors of the business. *See id.* ¶¶ 10–11. Boeing has only rarely licensed the data, and then not to significant competitors. *See id.* ¶¶ 12–15. And any third-party access to the data is subject to terms that provide for the data’s confidentiality. *See id.* ¶ 13; *Tao of Sys. Integration, Inc. v. Analytical Servs. & Materials, Inc.*, 299 F. Supp. 2d 565, 574 (E.D. Va. 2004) (“[T]he owner of a trade secret may, without losing protection, disclose it to a licensee . . . if the disclosure is made in confidence.”). When Aurora disclosed the data to Virgin Galactic, Aurora made explicit that the data was being disclosed as proprietary information subject to the Master Agreement, not pursuant to any license. *See* Wirsing Decl. ¶¶ 42–43 & Ex. G (“This document contains Boeing Proprietary Information” and Aurora “is not offering or conveying a license at this time.”). The disclosure was therefore conditioned on Virgin Galactic’s contractual duty to keep the data confidential and return or destroy the data at Aurora’s request. *See id.* Ex. A, Master Agreement §§ 8.H, 8.F.

* * *

Because the equations and data disclosed in the Math Model Documents and 262 Document are protectable information, derive economic value from not being generally known, and are kept secret by reasonable measures, they are trade secrets under both federal and state law.

B. Virgin Galactic Misappropriated Boeing’s and Aurora’s Trade Secrets.

Virgin Galactic has misappropriated both of these trade secrets. “[D]isclosure or use of a trade secret of another without express or implied consent” is misappropriation when the defendant acquired the trade secret “under circumstances giving rise to a duty to maintain the secrecy of the trade secret or limit the use of the trade secret.” 18 U.S.C. § 1839(5)(B)(ii)(II); *accord* 6 Del. C. § 2001(2)(b)(2)(B). That is exactly what has happened here. Boeing is likely to succeed in showing

that Virgin Galactic's ongoing use, threatened further use and disclosure, and refusal to destroy the Math Model Documents and 262 Document constitute misappropriation of these trade secrets. And as to the Math Model Documents, Virgin Galactic's assertion of ownership after Aurora requested their destruction independently demonstrates misappropriation. *See* 18 U.S.C. § 1839(5)(B)(iii)(II) (misappropriation when the trade secret is "acquired by accident or mistake"); *accord* 6 Del. C. § 2001(2)(b)(3).

Math Model Documents. Boeing and Aurora are likely to succeed in showing that Virgin Galactic has misappropriated and threatens continued misappropriation of the proprietary equations reflected in the Math Model Documents.

Virgin Galactic plans to use or disclose the equations without consent from Boeing or Aurora, despite being given the documents "under circumstances giving rise to a duty to maintain the secrecy of the trade secret." 18 U.S.C. § 1839(5)(B)(ii)(II). Virgin Galactic has held the Math Model Documents since the end of Task Order 2.1. *See* Wirsing Decl. ¶¶ 34, 36. Virgin Galactic has told shareholders that it plans to release a new Mothership in 2027 and projects a "cash positive growth phase" beginning around that time that necessarily assumes a new Mothership has been developed by then. Virgin Galactic Holdings, Inc., Q3 Earnings Call Transcript (Nov. 8, 2023), *available at* <https://tinyurl.com/VGQ3EarningsTranscript>; Q3 Earnings Presentation (Nov. 8, 2023), at 16, *available at* <https://tinyurl.com/VGQ32023Earnings>. Virgin Galactic cannot achieve that timeline without contracting with another vendor or devoting significantly more resources to the aircraft. Wirsing Decl. ¶ 29; Virgin Galactic's public promise demonstrates that if it has not yet misappropriated the equations by use or disclosure, it will do so imminently.

But Virgin Galactic received the equations pursuant to Aurora's work under the Master Agreement, which required Virgin Galactic to maintain their secrecy, refrain from using them

without Boeing's and Aurora's consent, and destroy them at Aurora's instruction. *See* Wirsing Decl. Ex. A, Master Agreement §§ 8.H, 8.F. In light of these "confidentiality obligations," Virgin Galactic misappropriated the Math Model Documents because it "acquired the . . . information" in them while "under a duty to maintain that information's secrecy." *Variable Annuity Life Ins. Co.*, 535 F. Supp. 3d at 514 (citation omitted) (finding likelihood of success on misappropriation claim); *Space Sys./Loral*, 306 F. Supp. 3d at 854–55 (allegations that defendant "accessed files . . . beyond the files the employee was authorized to view," in "violation of . . . contractual" duties stated claim for misappropriation on this theory and others).

Asserting entitlement to trade secrets in breach of contractual obligations is just the kind of conduct courts have recognized as misappropriation and threatened misappropriation justifying preliminary injunctive relief. For example, in *Peraton, Inc. v. Raytheon Corporation*, a court in this district entered a preliminary injunction requiring a defendant to segregate information obtained during the parties' terminated teaming agreements on two government programs from the defendant's forward-looking work on those same programs. 2017 WL 11501665, at *2, *5 (E.D. Va. Nov. 7, 2017). Although the parties' agreements imposed a "prohibition on any future [program] activities" for employees who had received the "proprietary information," the defendant refused to implement measures to protect that information while it continued "competing for precisely the same programs." *Id.* at *2–*3. That is just what Virgin Galactic has done here. Instead of destroying Boeing and Aurora's trade secrets at Aurora's instruction, Virgin Galactic has threatened to use or disclose them by "maintaining" that "nothing about its relationship with [Aurora] would preclude it" from "pursuing" further development of the Mothership "on its own or in conjunction with another teaming partner." *Id.* at *3.

The fact that Virgin Galactic first took the position that it owns the Math Model Documents *after* Aurora inadvertently disclosed them and requested their destruction also independently demonstrates misappropriation because Virgin Galactic knew, before asserting ownership of the Math Model Documents, that they “had been acquired by accident or mistake.” 18 U.S.C. § 1839(5)(B)(iii)(II). The parties understood, as part of the discussions that led to the creation of the Math Model Documents, that Aurora would not provide Virgin Galactic with the actual proprietary equations underlying the simulator model the parties contemplated creating. *See* Wirsing Decl. ¶ 30 & Ex. F; Gregg Decl. ¶¶ 23–24. But after being notified of the inadvertent disclosure, Virgin Galactic refused to destroy the Math Model Documents and has taken the position that it in fact owns or is entitled to a license in them. Wirsing Decl. ¶¶ 35–36. This amounts to misappropriation under the DTSA and DUTSA independent of the additional contractual obligation to destroy the Math Model Documents. *See* 18 U.S.C. § 1839(5)(B)(iii)(II); 6 Del. C. § 2001(2)(b)(3); *e.g.*, *Myers v. Williams*, 819 F. Supp. 919, 921 (D. Or. 1993) (entering preliminary injunction under identical Uniform Trade Secrets Act provision to prevent disclosure of trade secret “acquired by mistake.”).

By refusing to destroy the equations in the Math Model Documents in breach of this obligation, Virgin Galactic has also misappropriated them for the independent reason that it has “acquired” them by “improper means.” 18 U.S.C. § 1839(5)(A). Courts in this district have regularly held the breach of a duty to “return” and “maintain the[] secrecy” of trade secrets amounts to misappropriation under this theory. *Apollo Enter. Imaging Corp. v. Conyers*, 2020 WL 1896706, at *2, *4 (E.D. Va. Jan. 10, 2020) (entering preliminary injunction where defendant “acquired [trade secrets] through improper means” because he “retained possession” of those trade secrets in “breach of his duty to identify them, return them to [the plaintiff], and maintain their secrecy”);

OROS, Inc., 2019 WL 2361047, at *5 (denying motion to dismiss misappropriation claim premised on this theory); *see also JetSmarter, Inc. v. Benson*, 2018 WL 2694598, at *4–5 (S.D. Fla. Apr. 6, 2018) (same). This theory of misappropriation does not require Boeing and Aurora to show that Virgin Galactic has used or disclosed the Math Model Documents. *See Sys. 4, Inc. v. Landis & Gyr, Inc.*, 8 F. App'x 196, 200 (4th Cir. 2001) (per curiam).

262 Document. Boeing and Aurora are likely to succeed in showing misappropriation as to the data in the 262 Document for similar reasons. Virgin Galactic maintains that it is entitled both to use and to disclose the data despite receiving them “under circumstances giving rise to a duty to maintain [their] secrecy.” 18 U.S.C. § 1839(5)(B)(ii)(II). Given its public assertions that it will produce a new Mothership on the same timeline the parties expected to realize together, Virgin Galactic appears to plan to use the test data imminently.

Such use and threatened further use or disclosure constitutes misappropriation because Virgin Galactic acquired the data reflected in the 262 Document under circumstances that gave rise to a duty to maintain their secrecy—namely, the terms of the Master Agreement. *See Variable Annuity Life Ins. Co.*, 535 F. Supp. 3d at 514–15 (holding contractual confidentiality obligations imposed a duty to maintain secrecy); *Space Sys./Loral*, 306 F. Supp. 3d at 854–55 (similar). The communication providing the 262 Document expressly stated that Aurora was “not offering or conveying a license.” Wirsing Decl. Ex. G. Rather, the 262 Document was being provided “subject to the provisions of Article 8 (Proprietary Information) of the Master Agreement,” *id.*, which requires Virgin Galactic to “safeguard the Proprietary Information to prevent its disclosure to or use by third parties” and “promptly return, or otherwise destroy, Proprietary Information as [Aurora] may direct.” Wirsing Decl. Ex. A, Master Agreement §§ 8.A.2, 8.F. The same email further explained that the 262 Document contained no Foreground Intellectual Property created

for the Virgin Galactic project and did not constitute a Deliverable under any Task Order. Wirsing Decl. Ex. G. And the document, on its face, bears the marking: “AURORA PROPRIETARY/BOEING PROPRIETARY.” Wirsing Decl. Ex. H. Virgin Galactic did not dispute those terms upon receipt of the 262 Document but has nevertheless refused to destroy the 262 Document at Boeing and Aurora’s direction.³ See Wirsing Decl. ¶¶ 44, 48.

* * *

The equations in the Math Model Documents and the test data in the 262 Document are trade secrets that Virgin Galactic has misappropriated and continues to misappropriate. Boeing and Aurora’s misappropriation claims are thus likely to succeed.

II. BOEING AND AURORA ARE LIKELY TO SUCCEED ON THE MERITS OF THEIR CLAIMS FOR BREACH OF CONTRACT.

Because Virgin Galactic has refused to destroy these trade secrets in violation of the Master Agreement’s requirements, Boeing and Aurora are also likely to succeed on the merits of their claims for breach of contract. Those claims provide an independently sufficient basis for preliminary injunctive relief. See *Cap. One Fin. Corp. v. Sykes*, 2021 WL 2903241, at *11–12 (E.D. Va. July 9, 2021) (“A breach of contract claim based on divulging confidential information does not require a finding that the materials at issue constitute a trade secret.”).

The Master Agreement and Task Orders are plainly “valid contracts” that protect the confidentiality of Boeing and Aurora’s trade secrets. *Id.* at *12. As explained, they require a receiving party to “promptly return, or otherwise destroy, Proprietary Information as the Disclosing Party may direct.” Wirsing Decl. Ex. A, Master Agreement § 8.F. And they prohibit a

³ Virgin Galactic’s refusal to destroy the 262 Document, like the Math Model Documents, in breach of the Master Agreement’s requirement to do so, also amounts to misappropriation under a theory of “acquisition” by “improper means.” 18 U.S.C. § 1839(5)(A); see *supra* Background Part C.2.

receiving party from making “further use, either directly or indirectly for any third parties,” of Proprietary Information or its derivatives “[w]ithout obtaining the owning party’s written consent.” *Id.* § 8.H. Despite these obligations, Virgin Galactic has “kept” Boeing’s and Aurora’s trade secrets and threatens to “g[i]ve the information” to third parties. *Cap. One Fin. Corp.*, 2021 WL 2903241, at *12; *see supra* Background Part C. Virgin Galactic’s failure to destroy proprietary information as the Master Agreement requires makes Boeing and Aurora likely to succeed on their claims that Virgin Galactic has breached the parties’ agreements. *See SDSE Networks, Inc. v. Mathur*, 2022 WL 18539944, at *4 (E.D. Va. Dec. 28, 2022) (entering preliminary injunction after finding likelihood of success on claims for breach of contract); *Variable Annuity Life Ins. Co.*, 535 F. Supp. 3d at 505–06 (same).

To be sure, Virgin Galactic is entitled to certain specified intellectual property under the Master Agreement—*i.e.*, Foreground Intellectual Property developed for it and some Background Intellectual Property licensed to it by Aurora. Wirsing Decl. Ex. A, Master Agreement § 7. Foreground Intellectual Property is Intellectual Property “first developed, conceived, or generated” by Boeing or Aurora for the benefit of a party under the Master Agreement, “resulting from [Aurora’s] performance and funded by [Virgin Galactic],” along with “any derivative works thereof.” *Id.* Ex. A, Master Agreement, at Ex. A § 24. Background Intellectual Property, in general, means “Intellectual Property, and any derivative works thereof, other than Foreground Intellectual Property.” *Id.* Ex. A, Master Agreement at Ex. A § 9. In particular, “AFS Background IP” is “any Background Intellectual Property owned by either [Aurora] or one of its Affiliates that is either incorporated into a Deliverable or that is necessary for [Virgin Galactic] to exploit its rights in the Foreground Intellectual Property.” *Id.* Ex. A, Master Agreement, at Ex. A. § 4. The trade secrets at issue here are neither Foreground Intellectual Property nor AFS Background IP incorporated

into a Deliverable or necessary to exploit Virgin Galactic's rights in Foreground Intellectual Property.

Take first the Math Model Documents. They are not Foreground Intellectual Property because Boeing has spent years developing and refining the equations in them, investing its own resources to do so, and they long predate Aurora's engagement with Virgin Galactic. Gregg Decl. ¶¶ 10–11; Luo Decl. ¶ 6. They were incorporated into an internal working document that Aurora developed to inform a potential *future* scope of work; but at all times, the parties understood that even that future work would *not* allow Virgin Galactic access to the underlying equations. Wirsing Decl. ¶¶ 30–31 & Ex. F; Gregg Decl. ¶ 23.⁴ Nor are they AFS Background IP. The Master Agreement is clear that Aurora, not Virgin Galactic, “shall identify” AFS Background IP. Wirsing Decl. Ex. A, Master Agreement § 7.C.1. Aurora did not do so. That is because the Math Model Documents were neither a contract Deliverable nor incorporated into one. *Id.* ¶¶ 31–33. Nor are they necessary for Virgin Galactic to exploit its rights in any Foreground Intellectual Property, given that they related only to hypothetical work under a potential *future* Task Order that Aurora had not yet agreed to undertake. *Id.* ¶ 30; Gregg Decl. ¶ 23. The Master Agreement further provides that it is Aurora's role—not Virgin Galactic's—to “identify” intellectual property subject to license. Wirsing Decl. Ex. A, Master Agreement § 7.C.1. Aurora never identified the Math Model Documents as AFS Background IP and the parties never identified them on Exhibit E to the Master Agreement, the contractual mechanism for recognizing such intellectual property. *Id.* Ex. A, Master Agreement § 7.C.2.

⁴ Virgin Galactic has not paid Aurora for creation of the Math Model Documents. Indeed, it has not paid Aurora for any work performed after the completion of Task Order 1. *See* Wirsing Decl. ¶ 27. In any event, the Math Model Documents were not part of any contractual deliverable under Task Order 1 or 2.1. *Id.* ¶ 32.

Any argument that Virgin Galactic has rights to the 262 Document under the Master Agreement—either as Foreground Intellectual Property or AFS Background IP—is likewise wrong. The data are not Foreground Intellectual Property because they were not “first developed, conceived, or generated” in the scope of the project. *Id.* Ex. A, Master Agreement at Ex. A § 24. To the contrary, Boeing spent large sums of money on years of research to develop the material qualification and allowables test data before Aurora ever contracted with Virgin Galactic. *See* Sawicki Decl. ¶¶ 20–21. Nor is the 262 Document AFS Background IP. Aurora did not identify it as such, and rightly so—it was neither incorporated into a Deliverable nor necessary for Virgin Galactic to exploit its rights in any Foreground Intellectual Property. *See* Wirsing Decl. ¶ 45. Virgin Galactic contracted for Aurora’s recommendation for an appropriate composite material for the Mothership and for information regarding the properties of that material. *Id.* Ex. B, at 10 (Statement of Work § 1.3.3). Aurora provided that information in the Sizing Allowables and Process Specification documents. *See id.* ¶¶ 37–39. But Virgin Galactic never contracted for, and Aurora never offered to license, the vast data set contained in the 262 Document, which shows *how* Boeing derived that information.

The Math Model Documents and 262 Document therefore remain Boeing’s and Aurora’s Proprietary Information under the Master Agreement, and Virgin Galactic is contractually obligated to “promptly return, or otherwise destroy” them as Aurora directs. *Id.* Ex. A, Master Agreement § 8.F. The Master Agreement provides that “[a]ny disagreement between the Parties as to the categorization of Background Intellectual Property shall be resolved by mutual agreement”; if parties are “unable to reach agreement as to the categorization” Aurora is to provide Foreground Intellectual Property “in accordance with Paragraph C of Article 23 (Changes).” *Id.* Ex. A, Master Agreement § 7.C.2. Paragraph C, in turn, requires the parties to “mutually agree[.]”

on “an equitable adjustment”—that is, agreed terms of *payment*—under which Aurora would provide the disputed intellectual property to Virgin Galactic. *Id.* Ex. A, Master Agreement § 23.C. Nothing in the Master Agreement entitles Virgin Galactic to willfully retain and use intellectual property in which it has no rights or license.

Virgin Galactic’s continuing breach of contract imposes significant harm on Boeing and Aurora. As the court in *Capital One* recognized in entering a preliminary injunction, when defendants have “kept for themselves” or “shared with” others contractually-protected confidential information, the breach puts the owner of confidential information “at an immediate disadvantage in an already highly-competitive niche market.” *Cap. One Fin. Corp.*, 2021 WL 2903241, at *1, *9. Just so here: Virgin Galactic’s use or disclosure of proprietary information in breach of the parties’ negotiated contractual protections would give it “a competitive advantage in [the] future” development of its Mothership. *Id.* at *13.

III. BOEING AND AURORA ARE LIKELY TO SUFFER IRREPARABLE HARM ABSENT A PRELIMINARY INJUNCTION.

Boeing and Aurora are likely to suffer irreparable harm absent a preliminary injunction. Injury is irreparable when it cannot be redressed by monetary damages or when the measure of those damages is “difficult to ascertain.” *Multi-Channel TV Cable Co. v. Charlottesville Qual. Cable Operating Co.*, 22 F.3d 546, 551 (4th Cir. 1994) (citation omitted), *abrogated on other grounds by Winter*, 555 U.S. 7; *Update, Inc. v. Samilow*, 311 F.Supp.3d 784, 795 (E.D. Va. 2018). To warrant preliminary injunctive relief, injury must be “actual and imminent.” *Scotts Co. v. United Indus. Corp.*, 315 F.3d 264, 283 (4th Cir. 2002). The injury resulting from Virgin Galactic’s misappropriation of trade secrets imposes just such irreparable harm.

Recognizing that trade secret misappropriation imposes irreparable injury, both the DTSA and the DUTSA authorize injunctive relief. *See* 18 U.S.C. § 1836(b)(3)(A); 6 Del. C. § 2002(a).

Courts in this district thus presume that likelihood of success on the merits of statutory trade secrets claims demonstrates irreparable harm sufficient to support a preliminary injunction. *See, e.g., Hampton Roads Connector Partners v. Land to Sand Site Servs., Inc.*, 2023 WL 8539536, at *10 (E.D. Va. Oct. 17, 2023) (“Because the Court finds that HRCP has established a likelihood of success on its trade secrets claims, HRCP has sufficiently demonstrated the threat of irreparable harm to support a preliminary injunction.”); *Peraton*, 2017 WL 11501665, at *4 (similar).

The disclosure of trade secrets also imposes irreparable harm by its nature apart from this statutory authorization of injunctive relief. The “value of [Boeing’s and Aurora’s] property right[s] lies in the competitive advantage over others that [they] enjoy[] by virtue of its exclusive access” to their trade secrets. *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1012 (1984). That is why Boeing and Aurora take extensive measures to protect these secrets and have only rarely licensed them, and even then subject to strict confidentiality protections. *See* Gregg Decl. ¶¶ 15–22, 24; Paish Decl. ¶¶ 12–15. The “continual loss of [their] intellectual property” Boeing and Aurora face from Virgin Galactic’s use of and refusal to destroy the trade secrets in question amounts to irreparable harm. *Datatel, Inc. v. Rose & Tuck, LLC*, 2005 WL 1668020, at *9 (E.D. Va. June 17, 2005) (declining to dissolve preliminary injunction). Indeed, courts routinely enter preliminary injunctions on grounds that the “potential disclosure of trade secrets establishes immediate irreparable harm because a trade secret, once lost is, of course, lost forever.” *SDSE Networks*, 2022 WL 18529944, at *6 (internal quotation marks and citation omitted); *see CACI, Inc. - Fed. v. U.S. Navy*, 674 F. Supp. 3d 257, 2023 WL 3570439, at *14 (E.D. Va. 2023) (similar); *Cap. One Fin. Corp.*, 2021 WL 2903241, at *13; *Peraton*, 2017 WL 11501665, at *4; *Home Funding Grp., LLC v. Myers*, 2006 WL 6847953, at *2 (E.D. Va. Dec. 14, 2006). And far from disavowing any “intention of using” Boeing and Aurora’s trade secrets, Virgin Galactic has insisted that it holds

an unqualified right to use and disclose them. *Brightview Grp., LP v. Teeters*, 441 F. Supp. 3d 115, 139 (D. Md. 2020) (entering preliminary injunction where the court was “unconvinced that [defendants did] not intend to use” trade secrets in order to “save[] some time”); *Peraton*, 2017 WL 11501665, at *4 (“consistently maintained” claim to entitlement supported preliminary injunction).

Boeing and Aurora also face irreparable harm on the facts of this case even absent any presumption of such harm. That is because Boeing and Aurora would be “irreparably harmed if its trade secrets are utilized in a way that compromises its ability to provide a unique . . . product” like the Mothership. *CACI*, 2023 WL 3570439, at *14. Take a similar case from this Court—*CACI*. There, the Navy had contracted with CACI to use its trade-secret software for aircraft inspections. *CACI*, 2023 WL 3570439, at *2. Despite contractual limitations on the Navy’s use of CACI’s trade secrets, the Navy shared those trade secrets with individuals working to replace the CACI system with new software. *Id.* at *4–5. In other words, the Navy was using CACI’s trade secrets to develop its own software system; the court entered an injunction to preserve CACI’s ability to supply a unique product. *Id.* at *14.

Likewise, Boeing and Aurora’s ability to provide a unique product will be compromised if Virgin Galactic continues to use the trade secrets to develop its own Mothership outside the terms of the parties’ contracts. Virgin Galactic’s public statements indicate that it now expects to complete its new Mothership by 2027—that is, on the same timeline Aurora projected under the most optimistic assumptions.⁵ See Wirsing Decl. ¶ 24. In other words, Virgin Galactic “acknowledges that it is developing a replacement” for the Mothership it previously sought to

⁵ Virgin Galactic Holdings, Inc. Q3 2023 Earnings Presentation (Nov. 8, 2023) at 10 available at <https://tinyurl.com/VGQ32023Earnings>; Virgin Galactic Holdings, Inc. Q3 Earnings Call Transcript (Nov. 8, 2023), available at <https://tinyurl.com/VGQ3EarningsTranscript>.

develop with Aurora. *CACI*, 2023 WL 3570439, at *14. And it insists that it is entitled to use Boeing’s and Aurora’s trade secrets “for precisely the same program[]” the parties worked on together. *Peraton*, 2017 WL 11501665, at *3. Using Boeing’s and Aurora’s trade secrets to develop a Mothership without Aurora necessarily destroys their exclusive ability to deliver that unique product. And using one of Boeing’s and Aurora’s competitors to finish developing the Mothership with the benefit of the trade secrets—which Virgin Galactic will almost certainly need to do to meet its projected timeline—would only exacerbate the irreparable harm: “[O]nce confidential information is disclosed to a competitor, the information cannot regain its secret status.” *Cap. One Fin. Corp.*, 2021 WL 2903241, at *14.

IV. THE EQUITIES FAVOR PROTECTING BOEING’S AND AURORA’S TRADE SECRETS.

The balance of the equities also supports a preliminary injunction. To assess the equities, courts must balance “competing claims of injury and must consider” the requested injunction’s “effect on each party.” *Winter*, 555 U.S. at 24 (internal quotation marks and citation omitted). This Court has explained that the “balancing of the equities strongly favors granting an injunction to foreclose [a party] from benefitting from [its] misappropriation of [another’s] trade secrets.” *Variable Annuity Life Ins. Co.*, 535 F. Supp. 3d at 518 (quoting *API Tech. Servs., LLC v. Francis*, 2013 WL 12131381, at *3 (E.D. Va. Dec. 4, 2013)) (alteration in original). That is because any injury a misappropriating defendant “might suffer as a result of an injunction ‘may be discounted by the fact that the defendant brought that injury upon itself.’” *SDSE Networks*, 2022 WL 18539944, at *6 (citation omitted); see *Cap. One Fin. Corp.*, 2021 WL 2903241, at *15.

So too here. As explained, Boeing and Aurora face substantial irreparable harm absent an injunction. *Supra* Part III. By contrast, a preliminary injunction would merely deprive Virgin Galactic of trade secrets that it is retaining in violation of the Master Agreement and the trade

secrets laws. Equity thus “strongly favors” an injunction to keep Virgin Galactic “from continuing to benefit from [its] misappropriation.” *Variable Annuity Life Ins. Co.*, 535 F. Supp. 3d at 518.

V. A PRELIMINARY INJUNCTION WOULD SERVE THE PUBLIC INTEREST.

The public interest likewise supports a preliminary injunction. “[T]here is a strong public interest in ensuring the protection of trade secrets.” *CACI*, 2023 WL 3570439, at *15. Boeing invested substantial time and money to develop the equations and the material qualification data reflected in the Math Model Documents and the 262 Document, and the public has an interest in avoiding “the destruction of incentives to develop proprietary information” like those trade secrets. *Cap. One Fin. Corp.*, 2021 WL 2903241, at *15; *see supra* Background Part C.

The public interest also “favors protecting confidential business information and enforcing valid contracts.” *SDSE Networks*, 2022 WL 18539944, at *7. The Master Agreement between Aurora and Virgin Galactic protects each party’s Proprietary Information. *See supra* Background Part B. A preliminary injunction would enforce that agreement and avoid “chill[ing] the willingness of parties to engage in contracts that involve the sharing of trade secrets with other parties, in fear that courts will not protect their information in the case of a breach.” *A.P. Moller-Maersk A/S v. eSCRUB Sys., Inc.*, 2007 WL 4562827, at *4 (E.D. Va. Dec. 21, 2007).

CONCLUSION

The Court should enter a preliminary injunction requiring Virgin Galactic to (1) destroy (or at minimum sequester) all copies of the Math Model Documents and the 262 Document in its possession and any work derived from or incorporating the Proprietary Information contained therein; (2) make no further use or disclosure of them pending resolution of Boeing and Aurora’s claims on the merits; and (3) identify any and all third parties to whom Virgin Galactic has disclosed them.

Dated: March 21, 2024

Respectfully submitted,

/s/ Brian C. Rabbitt

Stephen J. Cowen (*pro hac vice* forthcoming)

Brian C. Rabbitt (Virginia State Bar No. 77216)

Megan Lacy Owen (*pro hac vice* forthcoming)

JONES DAY

51 Louisiana Avenue, N.W.

Washington, D.C. 20001

Telephone: (202) 879-3939

Facsimile: (202) 626-1700

Counsel for Plaintiffs

The Boeing Company and

Aurora Flight Sciences Corporation,

a Boeing Company

CERTIFICATE OF SERVICE

I certify that on March 21, 2024, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system. Also on that date, I provided a copy of the foregoing to the following via electronic mail. In addition, a true and accurate copy of the foregoing will be served on the following pursuant to Federal Rule of Civil Procedure 5. I will file a supplemental certificate when service has taken place.

Brett J. Williamson
O'MELVENY & MYERS, LLP
610 Newport Center Drive
17th Floor
Newport Beach, CA 92660
(949) 823-7947
bwilliamson@omm.com

*Counsel for Defendant
Virgin Galactic, LLC*

s/ Brian C. Rabbitt

Stephen J. Cowen (*pro hac vice* forthcoming)
Brian C. Rabbitt (Virginia State Bar No. 77216)
Megan Lacy Owen (*pro hac vice* forthcoming)
JONES DAY
51 Louisiana Avenue, N.W.
Washington, D.C. 20001
Telephone: (202) 879-3939
Facsimile: (202) 626-1700

*Counsel for Plaintiffs
The Boeing Company and
Aurora Flight Sciences Corporation,
a Boeing Company*